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EXAMINER
NAHAR, QAMRUN

ART UNIT	PAPER NUMBER
2124	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	**Application No.** 09/725,983	**Applicant(s)** FRASER ET AL.
	Examiner Qamrun Nahar	**Art Unit** 2124

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _19 May 2004_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-34 and 38-58_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-34 and 38-58_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   This action is in response to the amendment filed on 5/19/04.

2.   The objection to claim 19 is withdrawn in view of applicant's amendments.

3.   The rejection under 35 U.S.C. 112, second paragraph, as being indefinite for failing to

particularly point out and distinctly claim the subject matter which applicant regards as the

invention to claims 31-34 and 55-58 is withdrawn in view of applicant's amendments.

4.   The rejection under 35 U.S.C. 101 because the claimed invention is directed to non-

statutory subject matter to claims 35-37 is moot in view of applicant's amendments.

5.   The rejection under 35 U.S.C. 102(e) as being anticipated by Levine (U.S. 6,349,406) to

claims 35-37 is moot in view of applicant's amendments.

6.   Claims 19, 31, and 55 have been amended.

7.   Claims 35-37 have been cancelled.

8.   Claims 1-34 and 38-58 are pending.

9.   Claims 1-4, 6-7, 9-13, 15, 17-23, 25-34, 38-41, 43-44, 46-50, 52 and 54-58 stand finally

rejected under 35 U.S.C. 102(e) as being anticipated by Johnston (U.S. 6,189,142).

10.   Claims 5, 8, 14, 16, 24, 42, 45, 51 and 53 stand finally rejected under 35 U.S.C. 103(a) as

being unpatentable over Johnston (U.S. 6,189,142) in view of Levine (U.S. 6,349,406).

Response to Amendment

Claim Objections

11.   Claim 31 is objected to because of the following informalities: Claim 31 has been

labeled as "Original". However, claim 31 has been amended. Therefore, claim 31 is being

treated as "Currently Amended".

Claim Rejections - 35 USC § 102

12.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
> in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
> patent by another filed in the United States before the invention by the applicant for patent, except that an
> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
> subsection of an application filed in the United States only if the international application designated the United
> States and was published under Article 21(2) of such treaty in the English language.

13.   Claims 1-4, 6-7, 9-13, 15, 17-23, 25-34, 38-41, 43-44, 46-50, 52 and 54-58 are rejected

under 35 U.S.C. 102(e) as being anticipated by Johnston (U.S. 6,189,142).

Per Claim 1:

The Johnston patent discloses:

- a computerized method for translating source code into object code, comprising:

recognizing a history operator and a history operand in the source code; generating first

object code that, when executed, saves a data history associated with an instance of the

history operand (column 9, lines 43-51 and column 10, lines 1-14; "code hooks", when

executed, saves a data history associated with an instance of the history operand; where the

history operand is identified by the locations where the code hooks are inserted. History

operands are the elements in the identified locations.)

**- and generating second object code that, when executed, performs the history operator on
the data history** (column 8, lines 54-67 to column 9, lines 1-17).

Per Claim 2:

The Johnston patent discloses:

**- wherein the first object code further saves values assigned to a variable in the data history
when the object code is executed** (column 9, lines 43-51 and column 10, lines 1-14).

Per Claim 3:

The Johnston patent discloses:

**- wherein the history operand further comprises an expression of variables and wherein the
first object code further saves a result of the expression in the data history** (column 10, lines
1-14).

Per Claim 4:

The Johnston patent discloses:

- **wherein generating first object code further comprises allocating storage for the data history** (column 8, lines 34-53).

Per Claim 6:

The Johnston patent discloses:

- **wherein performing the history operator on the data history further comprises: querying the data history based on contents of the data history** (column 8, lines 34-53).

Per Claim 7:

The Johnston patent discloses:

- **wherein the history operand comprises a function and the data history comprises values returned by the function** (column 8, lines 34-53).

Per Claim 9:

The Johnston patent discloses:

- **wherein the history operand comprises a label associated with a source code statement, and wherein performing the history operator on the data history further comprises:**

counting a number of times the source code statement associated with the label was

executed (column 8, lines 34-53).

Per Claim 10:

The Johnston patent discloses:

- wherein the label is programmer-defined (column 8, lines 34-53).

Per Claim 11:

The Johnston patent discloses:

- wherein the label comprises a programming language control construct (column 8, lines

34-53).

Per Claim 12:

The Johnston patent discloses:

- wherein performing the history operator on the data history is a function selected from a

group consisting of: summing the data history, averaging the data history, determining a

maximum of the data history, selecting an element of the data history, determining a

minimum of the data history, determining a number of values in the data history,

determining a first entry in the data history, determining a last entry in the data history,

determining a subsequence of the data history, performing a reduction operation, and

performing a statistical function (column 8, lines 54-67 to column 9, lines 1-18).

Per Claim 13:

The Johnston patent discloses:

- the history operand comprises a programming language keyword representing a loop;

and the history operator comprises an iteration count of the loop (column 8, lines 54-67 to

column 9, lines 1-18).

Per Claim 15:

The Johnston patent discloses:

- wherein saving the data history further comprises: saving the data history in a linked list

(column 8, lines 34-53).

Per Claim 17:

The Johnston patent discloses:

- wherein performing the history operator on the data history further comprises: resetting the data his

Per Claim 18:

The Johnston patent discloses:

- wherein saving the data history and performing the history operator further comprise updating an accumulator (column 8, lines 34-53).

Per Claims 19 (Amended), 20-21, 23 & 25:

These are computer-readable medium versions of the claimed method discussed above (claims 1-3, 7 & 9, respectively), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also anticipated by Johnston.

Per Claim 22:

The Johnston patent discloses:

- wherein the history operand comprises a heap-allocated object (column 10, lines 15-44).

Per Claims 26-27:

These are computer-readable medium versions of the claimed method discussed above (claims 1 and 4), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also anticipated by Johnston.

Per Claims 28-30:

These are computer-readable medium versions of the claimed method discussed above (claims 6, 9 and 12, respectively), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also anticipated by Johnston.

Per Claim 31 (Amended):

This is a computer system version of the claimed method discussed above (claims 1 and 4), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, this claim is also anticipated by Johnston.

Per Claims 32-34:

These are computer system versions of the claimed method discussed above (claims 2, 12 and 9, respectively), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also anticipated by Johnston.

Per Claims 38-41, 43-44, 46-50, 52 & 54:

These are another versions of the claimed method discussed above (claims 1-4, 6-7, 9-13, 15 & 17, respectively), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also anticipated by Johnston.

Per Claims 55 (Amended) & 56:

These are computer-readable medium versions of the claimed method discussed above,

claim 1, wherein all claim limitations also have been addressed and/or covered in cited areas as

set forth above. Thus, accordingly, these claims are also anticipated by Johnston.

Per Claims 57-58:

These are computer-readable medium versions of the claimed method discussed above

(claims 6 & 9, respectively), wherein all claim limitations also have been addressed and/or

covered in cited areas as set forth above. Thus, accordingly, these claims are also anticipated by

Johnston.

Claim Rejections - 35 USC § 103

14.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

15.   Claims 5, 8, 14, 16, 24, 42, 45, 51 and 53 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Johnston (U.S. 6,189,142) in view of Levine (U.S. 6,349,406).

Per Claim 5:

The rejection of claim 2 is incorporated, and further, Johnston does not explicitly teach

that the data history further comprises program locations where the assignments occurred and

timestamps indicating when the assignment was made. Levine teaches that the data history

further comprises program locations where the assignments occurred and timestamps indicating

when the assignment was made (column 13, lines 66-67 to column 14, lines 1-13).

It would have been obvious to one having ordinary skill in the computer art at the time of

the invention was made to modify the method disclosed by Johnston to include that the data

history further comprises program locations where the assignments occurred and timestamps

indicating when the assignment was made using the teaching of Levine. The modification would

be obvious because one of ordinary skill in the art would be motivated to determine the amount

of time elapsed between each event.

Per Claim 8:

The rejection of claim 7 is incorporated, and further, Johnston does not explicitly teach

that the data history further comprises program locations where the values were returned and

timestamps indicating when the values were returned. Levine teaches that the data history

further comprises program locations where the values were returned and timestamps indicating

when the values were returned (column 13, lines 66-67 to column 14, lines 1-13).

It would have been obvious to one having ordinary skill in the computer art at the time of

the invention was made to modify the method disclosed by Johnston to include that the data

history further comprises program locations where the values were returned and timestamps

indicating when the values were returned using the teaching of Levine. The modification would

be obvious because one of ordinary skill in the art would be motivated to determine the amount

of time elapsed between each event.

Per Claim 14:

The rejection of claim 1 is incorporated, and further, Johnston does not explicitly teach that saving the data history further comprises: saving the data history in an array, wherein each element of the array comprises a value associated with the history operand at a particular time. Levine teaches saving the data history further comprises: saving the data history in an array, wherein each element of the array comprises a value associated with the history operand at a particular time (column 13, lines 66-67 to column 14, lines 1-13 and Fig. 10A).

It would have been obvious to one having ordinary skill in the computer art at the time of the invention was made to modify the method disclosed by Johnston to include saving the data history further comprises: saving the data history in an array, wherein each element of the array comprises a value associated with the history operand at a particular time using the teaching of Levine. The modification would be obvious because one of ordinary skill in the art would be motivated to store data efficiently.

Per Claim 16:

The rejection of claim 1 is incorporated, and further, Johnston does not explicitly teach that saving the data history further comprises: saving the data history in a file. Levine teaches saving the data history further comprises: saving the data history in a file (column 3, lines 16-18).

It would have been obvious to one having ordinary skill in the computer art at the time of the invention was made to modify the method disclosed by Johnston to include saving the data history further comprises: saving the data history in a file using the teaching of Levine. The

modification would be obvious because one of ordinary skill in the art would be motivated to

store data for post processing.

Per Claim 24:

This is a computer-readable medium version of the claimed method discussed above,

claim 8, wherein all claim limitations also have been addressed and/or covered in cited areas as

set forth above. Thus, accordingly, this claim is also obvious.

Per Claims 42, 45, 51 & 53:

These are another versions of the claimed method discussed above (claims 5, 8, 14 & 16,

respectively), wherein all claim limitations also have been addressed and/or covered in cited

areas as set forth above. Thus, accordingly, these claims are also obvious.

Response to Arguments

16.   Applicant's arguments filed on 5/19/04 have been fully considered but they are not

persuasive.

In the remarks, the applicant argues that:

a)   Independent claim 1, upon which claims 2-4, 6-7, 9-13, 15, and 17-18 depend, recites in

part "recognizing a history operator and a history operand in the source code; generating first

object code that, when executed, saves a data history associated with an instance of the history

operand; and generating second object code that, when executed, performs the history operator

on the data history." Johnston does not teach or suggest recognizing a history operator and a

history operand in the source code, generating first object code that, when executed, saves a data history associated with an instance of the history operand, and generating second object code that, when executed, performs the history operator on the data history. Rather, Johnston teaches adding code for debugging or tracing the execution of the visually created program. For at least these reasons, independent claim 1 and its dependent claims 2-4, 6-7, 9-13, 15, and 17-18 are distinguishable from Johnston and should be allowed.

Examiner's response:

a)   Examiner strongly disagrees with applicant's assertion that Johnston fails to disclose the claimed limitations recited in claim 1. Johnston clearly shows each and every limitation in claim 1. As previously pointed out in the last Office Action (Mailed on 2/26/04), Johnston teaches recognizing a history operator and a history operand in the source code; generating first object code that, when executed, saves a data history associated with an instance of the history operand (column 9, lines 43-51 and column 10, lines 1-14; "code hooks", when executed, saves a data history associated with an instance of the history operand; where the history operand is identified by the locations where the code hooks are inserted. History operands are the elements in the identified locations.); and generating second object code that, when executed, performs the history operator on the data history (column 8, lines 54-67 to column 9, lines 1-17).

In addition, see the rejection above in paragraph 13 for rejection to claims 1-4, 6-7, 9-13, 15, 17-23, 25-34, 38-41, 43-44, 46-50, 52 and 54-58.

In the remarks, the applicant argues that:

b)   Independent claim 19, upon which claims 20-23 and 25 depend, recites in part "a history

operand to direct a translator to generate first object code that, when executed, saves a data

history associated with an instance of the history operand; and a history operator to direct the

translator to generate object second code that, when executed, performs the history operator on

the data history." Johnston does not teach or suggest a history operand to direct a translator to

generate first object code that, when executed, saves a data history associated with an instance of

the history operand, and a history operator to direct the translator to generate object second code

that, when executed, performs the history operator on the data history. Rather, Johnston teaches

adding code for debugging or tracing the execution of the visually created program. For at least

these reasons, independent claim 19 and its dependent claims 20-23 and 25 are distinguishable

from Johnston and should be allowed.

Examiner's response:

b)   The Examiner has already addressed the applicant's arguments in the Examiner's

Response (a) above. See the Examiner's Response (a) above and the rejection above in

paragraph 13 for rejection to claims 1-4, 6-7, 9-13, 15, 17-23, 25-34, 38-41, 43-44, 46-50, 52 and

54-58.

In the remarks, the applicant argues that:

c)   Independent claim 26, upon which claims 27-30 depend, recites in part "recognizing a

history operand in source code; finding at least one instance of the history operand in the source

code in response to recognizing the history operand; allocating storage; and generating first

object code associated with each instance, wherein the first object code, when executed, saves a

data history associated with the history operand in the storage." Johnston does not teach or

suggest recognizing a history operand in source code, finding at least one instance of the history

operand in the source code in response to recognizing the history operand, allocating storage, and

generating first object code associated with each instance, wherein the first object code, when

executed, saves a data history associated with the history operand in the storage. Rather,

Johnston teaches adding code for debugging or tracing the execution of the visually created

program. For at least these reasons, independent claim 26 and its dependent claims 27-30 are

distinguishable from Johnston and should be allowed.

Examiner's response:

c)   The Examiner has already addressed the applicant's arguments in the Examiner's

Response (a) above. See the Examiner's Response (a) above and the rejection above in

paragraph 13 for rejection to claims 1-4, 6-7, 9-13, 15, 17-23, 25-34, 38-41, 43-44, 46-50, 52 and

54-58.

In the remarks, the applicant argues that:

d)   Independent claim 31, upon which claims 32-34 depend, recites in part "recognizing a

history operand in the source code, wherein the source code is contained in the memory; in

response to recognizing the history operand, finding at least one instance of the history operand

in the source code; allocating storage for a data history associated with the history operand;

generating first object code associated with each instance, wherein the first object code, when

executed, saves the data history associated with the history operand in the storage; and

generating second object code that, when executed, performs the history operator on the data

history." Johnston does not teach or suggest recognizing a history operand in the source code,

wherein the source code is contained in the memory, in response to recognizing the history

operand, finding at least one instance of the history operand in the source code, allocating

storage for a data history associated with the history operand, generating first object code

associated with each instance, wherein the first object code, when executed, saves the data

history associated with the history operand in the storage, and generating second object code

that, when executed, performs the history operator on the data history. Rather, Johnston teaches

adding code for debugging or tracing the execution of the visually created program. For at least

these reasons, independent claim 31 and its dependent claims 32-34 are distinguishable from

Johnston and should be allowed.

Examiner's response:

d)   The Examiner has already addressed the applicant's arguments in the Examiner's

Response (a) above. See the Examiner's Response (a) above and the rejection above in

paragraph 13 for rejection to claims 1-4, 6-7, 9-13, 15, 17-23, 25-34, 38-41, 43-44, 46-50, 52 and

54-58.

In the remarks, the applicant argues that:

e)   Independent claim 38, upon which claims 39-41, 43-44, 46-50, 52, and 54 depend, recites

in part "recognizing a history operator and a history operand in the source code; saving a data

history associated with an instance of the history operand; and performing the history operator on

the data history." Johnston does not teach or suggest recognizing a history operator and a history

operand in the source code, saving a data history associated with an instance of the history

operand, and performing the history operator on the data history. Rather, Johnston teaches

adding code for debugging or tracing the execution of the visually created program. For at least

these reasons, independent claim 38 and its dependent claims 39-41, 43-44, 46-50, 52, and 54 are

distinguishable from Johnston and should be allowed.

Examiner's response:

e)   The Examiner has already addressed the applicant's arguments in the Examiner's

Response (a) above. See the Examiner's Response (a) above and the rejection above in

paragraph 13 for rejection to claims 1-4, 6-7, 9-13, 15, 17-23, 25-34, 38-41, 43-44, 46-50, 52 and

54-58.

In the remarks, the applicant argues that:

f)   Independent claim 55, upon which claims 56-58 depend, recites in part "recognizing a

history operand in source code, the history operand representing a sequence of data associated

with the history of an operand instance; finding at least one instance of the history operand in the

source code in response to recognizing the history operand; and saving a data history associated

with each instance of the history operand in the storage." Further, claim 56 recites in part

"recognizing a history operator in the source code, the history operator representing a function

that object code Will perform on the data history associated with the history operand; and

performing the history operator on the data history." Johnston does not teach or suggest

recognizing a history operand in source code, the history operand representing a sequence of data

associated with the history of an operand instance, finding at least one instance of the history

operand in the source code in response to recognizing the history operand, and saving a data

history associated with each instance of the history operand in the storage. Neither does Johnston

teach or suggest recognizing a history operator in the source code, the history operator

representing a function that object code will perform on the data history associated with the

history operand and performing the history operator on the data history. Rather, Johnston teaches

adding code for debugging or tracing the execution of the visually created program. For at least

these reasons, independent claim 55 and its dependent claims 56-58 are distinguishable from

Johnston and should be allowed.

Examiner's response:

f)   The Examiner has already addressed the applicant's arguments in the Examiner's

Response (a) above. See the Examiner's Response (a) above and the rejection above in

paragraph 13 for rejection to claims 1-4, 6-7, 9-13, 15, 17-23, 25-34, 38-41, 43-44, 46-50, 52 and

54-58.

In the remarks, the applicant argues that:

g)   Claims 5, 8, 14, 16, 24, 42, 45, 51, and 53 are rejected under 35 U.S.C. j 103(a) as being

unpatentable over Johnston in view of Levine. The Applicant respectfully traverses the rejection

since the references, alone or in combination, fail to teach or suggest all the claimed limitation.

As discussed above, claim 1, upon which claims 5, 8, 14, and 16 depend, claim 19, upon which

claim 24 depends, and claim 38, upon which claims 42, 45, 51, and 53 depend all relate to using

a history operator and a history operand as described in the pending application. Johnston does

not teach or suggest using a history operator and a history operand as described in the pending

application. Rather, Johnston teaches adding code for debugging or tracing the execution of the

visually created program.

Levine relates to "a method and system for compensating for instrumentation overhead in

trace data by computing average minimum event times." (Abstract) More specifically, under

Levine "in order to profile a program, the program is executed to generate trace records that are

written to a trace file." (Col. 3, lines 16-18) The "trace data may be generated via selected events

and timers through the instrumented interpreter without modifying the source code." (Col. 8,

lines 14-16) The interpreter executes a trace program "used to record data upon the execution of

a hook, which is a specialized piece of code at a specific location in a routine or program in

which other routines may be connected." (Col. 9, lines 43-46) However, Levine does not teach or

suggest using a history operator and a history operand as described in the pending application.

Rather, Levine, similar to Johnston, teaches trace data generated by an interpreter upon execution

of a hook code in the source program.

Independent claim 1, upon which claims 5, 8, 14, and 16 depend, recites in part

"recognizing a history operator and a history operand in the source code; generating first object

code that, when executed, saves a data history associated with an instance of the history

operand', and generating second object code that, when executed, performs the history operator

on the data history" Levine, either alone or in combination with Johnston, does not teach or

suggest recognizing a history operator and a history operand in the source code, generating first

object code that when executed, saves a data history associated with an instance of the history

operand, and generating second object code that, when executed, performs the history operator

on the data history. For at least these reasons, independent claim 1 and its dependent claims 5, 8,

14, and 16 are distinguishable from the combination of Johnston and Levine and should be

allowed.

Examiner's response:

g)   The Examiner has already addressed the applicant's arguments in the Examiner's

Response (a) above. See the Examiner's Response (a) above.

        Furthermore, in response to applicant's arguments against the references individually, one

cannot show nonobviousness by attacking references individually where the rejections are based

on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In

re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

        In addition, see the rejection above in paragraph 15 for rejection to claims 5, 8, 14, 16,

24, 42, 45, 51 and 53.

In the remarks, the applicant argues that:

h)   Independent claim 19, upon which claim 24 depends, recites in part "a history operand to

direct a translator to generate first object code that, when executed, saves a data history

associated with an instance of the history operand; and a history operator to direct the translator

to generate object second code that, when executed, performs the history operator on the data

history." Johnston, either alone or in combination with Levine, does not teach or suggest a

history operand to direct a translator to generate first object code that, when executed, saves a

data history associated with an instance of the history operand, and a history operator to direct

the translator to generate object second code that, when executed, performs the history operator

on the data history. For at least these reasons, independent claim 19 and its dependent claim 24

are distinguishable from the combination of Johnston and Levine and should be allowed.

Examiner's response:

h)   The Examiner has already addressed the applicant's arguments in the Examiner's

Response (a) above. See the Examiner's Response (a) above.

Furthermore, in response to applicant's arguments against the references individually, one

cannot show nonobviousness by attacking references individually where the rejections are based

on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In

re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In addition, see the rejection above in paragraph 15 for rejection to claims 5, 8, 14, 16,

24, 42, 45, 51 and 53.

In the remarks, the applicant argues that:

i)   Independent claim 38, upon which claims 42, 45, 51, and 53 depend, recites in part

"recognizing a history operator and a history operand in the source code; saving a data history

associated with an instance of the history operand; and performing the history operator on the

data history." Johnston, alone or in combination with Levine, does not teach or suggest

recognizing a history operator and a history operand in the source code, saving a data history

associated with an instance of the history operand, and performing the history operator on the

data history. For at least these reasons, independent claim 38 and its dependent claims 42, 45, 51,

and 53 are distinguishable from the combination of Johnston and Levine and should be allowed.

Examiner's response:

i)   The Examiner has already addressed the applicant's arguments in the Examiner's

Response (a) above. See the Examiner's Response (a) above.

Furthermore, in response to applicant's arguments against the references individually, one

cannot show nonobviousness by attacking references individually where the rejections are based

on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In

re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In addition, see the rejection above in paragraph 15 for rejection to claims 5, 8, 14, 16,

24, 42, 45, 51 and 53.

Conclusion

17.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

18.   Any inquiry concerning this communication from the examiner should be directed to

Qamrun Nahar whose telephone number is (703) 305-7699. The examiner can normally be

reached on Mondays through Thursdays from 9:00 AM to 6:30 PM. The examiner can also be

reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kakali Chaki, can be reached on (703) 305-9662. The fax phone number for the

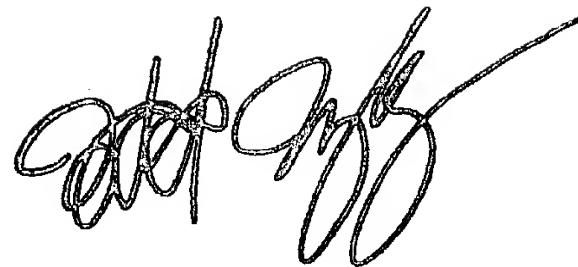organization where this application or processing is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (703) 305-3900.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit: 2124

QN
August 12, 2004

TODD INGBERG
PRIMARY EXAMINER